

BOL'SHAKOV, Anatoliy Stepanovich; SARIN, Valeriy Ivanovich;  
SHVAYNSHTEYN, Boris Simonovich; PONOMAREV, V.S., inzh.,  
retsenzent; ZAZOVSKIY, D.G., inzh., retsenzent; MAKAROV,  
M.S., inzh., retsenzent; POPOV, G.V., inzh., retsenzent;  
KURBATOV, A.I., retsenzent; KITAYEVA, Z.A., inzh.,  
retsenzent; SDOBNIKOV, Ye.F., retsenzent; KOVALEV, A.K.,  
inzh., retsenzent; KESAREV, A.P., inzh., retsenzent;  
KISELEVA, N.P., inzh., red.; GROMOV, S.A., kand. tekhn.  
nauk, red.; SHCHERBACHEVICH, G.S., inzh., red.; USENKO, L.A.,  
tekhn. red.

[Shunting diesel locomotives] Manevrovye teplovozy. Moskva,  
1962. 383 p. (MIRA 15:6)

(Diesel locomotives)

BARSOV, S.V.; ZAZOVSKIY, D.G.

Regulation of the fire pumps of 1D12 and D6 diesel engines. Elek.  
i tepl.tiaga 6 no.5:38-40 My '62. (MIRA 15:6)  
(Diesel engines--Fuel systems)

AZBEL', S.M., starshiy master; ZAZOVSKIY, D.G.

Seminar on the operation of ChME2 diesel locomotives. Elek.i tepl.-  
tiaga 6 no.1:25 Ja '62. (MIRA 15:1)

1. TSekh profilakticheskogo osmotra teplovozov depo Lyublino (for  
Azbel'). 2. Nachal'nik proizvodstvenno-tekhnicheskogo otдела depo  
Lyublino (for Zazovskiy).

(Diesel locomotives)

ZAZOVSKIY, D.G.

Modernization of the Ch<sup>ME</sup>2 switch engine. Elek.i tepl.tiaga 5  
no.9:42 S '61. (MIRA 14:10)

1. Nachal'nik proizvodstvenno-tekhnicheskogo otdela depo  
Lyublino.

(Diesel locomotives)

ZAZOVSKIY, A.

Advantages of a hydraulic hoist. Avt. transp. 36 no.10:17 U '58.  
(MIRA 13:1)

1.Glavnyy inzhener Novgorodskogo avtotresta.  
(Hydraulic jacks)

ZAZOVSKAYA, I.A.; POSPELOVA, R.V.; SHAVRIN, O.N.

Evaluating the dimensions of mosaic blocks by the width of X-ray lines. Fiz. met. i metalloved. 14 no.2:301-303 Ag '62. (MIRA 15:12)

1. Petrozavodskiy gosudarstvennyy universitet.  
(X-ray crystallography)

ACCESSION NR: AP4025091

qualitative argument is established on the optical nature of the coherence domain.  
Orig. art. has: 4 figures.

ASSOCIATION: Petrozavodskiy gosuniversitet (Petrozavod State University)

SUBMITTED: 12Jun62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 007

OTHER: 001

Card 2/2

ACCESSION NR: AP4025091

8/0139/63/000/006/0095/0098

AUTHORS: Zazovskaya, I. A.; Shivrin, O. N.

TITLE: Mosaic structure of metallic polycrystals and extinction effects. 2

SOURCE: IVUZ. Fizika, no. 6, 1963, 95-98

TOPIC TAGS: extinction effect, microgranular tungsten, x-ray irradiation, coarse powder, radiography, diffractometer, coherence domain

ABSTRACT: The extinction effect in coarse and microgranular tungsten powder under copper and molybdenum x-ray irradiation was studied. The coarse powder averaged 0.2-0.25 mm in size, whereas the fine specimen had a mean size of  $10\mu$ . Plane specimens were prepared from both types of powders with BF-2 bond, and the radiography was carried out on diffractometer URS-50-I in filtered copper and molybdenum. The measurements indicate that the coherence domain dimensions, evaluated from primary excitation effects, decrease with a decrease in radiation wave length. Measurements on the microgranular powder, however, show a very weak extinction from both Cu- and Mo-radiations, and even with a nonuniform coherence domain the results do not show the expected values. Hence, only a general

Card 1/2

ZAZOVSKAYA, I.A.; SHIVRIN, O.N.

Optical relation between mosaic blocks measured by the X-ray  
diffraction method. Kristallografiia 8 no. 5, 747 3-0 '63.  
(MIRA 16:10)

1. Petrozavodskiy gosudarstvennyy universitet.

ZAZOVIT, A.

The UT-54 telephone amplifier. Pozh. delo 3 no.7:21 J1 '57.  
(Telephone--Apparatus and supplies) (MLRA 10:8)

ZAZORIN, N.; STEPANOV, Yu.

In the stands of the industrial exhibition. Znan. sila 31 no.9:6-7  
8 '56. (Moscow--Exhibitions)(Machinery--Exhibitions) (MLRA '9:10)

L 8526-66

ACC NR: AT5027528

damping time is shortened if the excitation is turned on when the energy stored in the circuit is a minimum; 5) with the increase in bias, the oscillation rise time increases and the damping time decreases; 6) the rise time is at a minimum for a certain optimum excitation voltage; 7) when approaching the critical values of the parameters (beyond which the oscillations cannot be excited) the rise time increases rapidly; and 8) the analytic solution presented in earlier papers gives a faithful qualitative pattern of parametron operation but cannot be utilized for the estimate of operation near the critical point. Orig. art. has: 33 formulas and 9 figures.

SUB CODE: EC,DP / SUBM DATE: none / ORIG REF: 005

Cord 2/2 (pul)

L 8526-66

ACC. NR: AT5027528

SOURCE CODE: UR/2690/65/008/000/0195/0207

AUTHOR: Zaznova, N. Ye.; Kilyup, A. P.; Red'ko, V. A.

ORG: Institute of Electronics and Computer Technology AN LatSSR, Riga (Institut elektroniki i vychislitel'noy tekhniki)

TITLE: Digital computer analysis of transient processes in tunnel parametrons

SOURCE: AN LatSSR. Institut elektroniki i vychislitel'noy tekhniki, Trudy, v. 8, 1965. Avtomatika i vychislitel'naya tekhnika, 195-207

TOPIC TAGS: digital computer, computer application, computer component, semiconductor device

ABSTRACT: This article analyzes the transient processes in tunnel-diode parametrons. The authors describe the methods and give the results of digital computer calculations of a tunnel parametron. The theoretical conclusions were tested experimentally. Results show that 1) the most important characteristic determining the operation of the tunnel parametron is  $f_{tg} \approx (1/g) \cdot (1/C_{osc})$  is the average differential conductivity of the negative slope segment;  $f = \sqrt{L_{osc}/C_{osc}}$ ; for small values of this quantity the oscillations are close to simple harmonic ones, while for larger values, the oscillations exhibit a relaxation character; 2) high  $f_{tg}$  circuits are fast and quite insensitive to the interaction frequency or self-losses; 3) the rise time may be shortened if the excitation radio pulse phase is adjustable in such a way that the diodes may enter during the first half period the negative slope region; 4) the

Card 1/2

UDC: 621.382.233.621.372.45

ZAZNOBIN, N. B.

ZAZNOBIN, N. F. I TSARAPKIN, A. M.  
36212 Zagotovka lesa potochnym metodom. Opyt Nechunayev. lesprora-Khoza. Mekhanizatsiya  
trudoyemikh i tyazhelykh rabot, 1949, No. 11, S. 41-45.

SO: Letopis' Zhurnal'nykh Statey, No. 1949

AFANAS'YEV, V.V., inzh.; ZAZNOBIN, M.G., inzh.

Load sensor for production units. Mekh.i avtom.proizv. 16  
no.8:26-27 Ag '62. (MIRA 15:9)

(Electronic measurements)

Method for the automatic turbidity control of ....

8/27/63/000/003/007/049  
A06071126

Height of the irradiated layer of the coagulator. There are 3 figures and 5 references.

A. V.

[Abstractor's note: Complete translation]

Card 2/2

3/27/63/000/003/001/049  
A060/A126

AUTHORS: Khan, G.A., Smirnov, V.V., Zaznobil, M.G.

TITLE: Method for the automatic turbidity control of decantation from coagulator (For discussion)

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 29, abstract 3A162 (Obogashcheniye rud, 1962, no. 2 (38), 39 - 42)

TEXT: The article cites dependence curves for the capacitance of the transducer as a function of the turbidity of quartz of various sizes, of the turbidity of a suspension of various minerals, of the particle size at constant concentration, of the turbidity of decantation from coagulator under varying size of the solid phase (of a scheselite concentrate), and of the concentration of various reagents. A diagram and description is given of an electronic metering unit, as well as results of experiments, according to which the turbidity meter with capacitance transducer may be utilized in a system for automatic feeding of coagulating agents supplied to a coagulator, and for the control of the

Card 1/2

SAZIRNAYA, M.V.

Studying the autolysis of precipitation yeasts in beer  
during the secondary fermentation. Izv. vys. ucheb. zav.;  
pishoh. tekhn. no.4:76-79 '63. (MIRA 16:11)

1. Kiyevskiy tekhnologicheskoy institut pishchevoy  
promyshlennosti, kafedra tekhnologii brodil'nykh proizvodstv.

KOROLEV, Dmitriy Amosovich; CHEKAN, Lev Ivanovich; DENSHCHIKOV,  
Mikhail Tikhonovich; ZAZIBNAYA, M.V., retsenzent; URUSHADZE,  
M.G., retsenzent; MALCHENKO, A.L., prof., spetsred.;  
KOVALEVSKAYA, A.I., red.; SOKOLOVA, I.A., tekhn. red.

[Technology of the production of soft drinks] Tekhnologiya bez-  
alkogol'nykh napitkov. Moskva, Pishchepromizdat, 1962. 514 p.  
(MIRA 15:11)

(Soft drinks)

ZAZIRNAYA, M.V.

Autolysis of yeast in the first and second fermentation of beer.  
Izv.vys.ucheb.zav.; pishch.tekh. no.3:62-65 '62. (MIRA 15:7)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti,  
kafedra tekhnologii brodil'nykh proizvodstv.  
(Brewing) (Yeast)

ZAZIRNAYA, M.V.

USSR/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63559

Author: Mal'tsev, P. M., Zazirnaya, M. V., Velikaya, Ye. I., Vyal'ko, Ye. F.

Institution: None

Title: Effects of Separation on Qualitative Composition of Beer Wort

Original

Periodical: Tr. Kievsk. tekhnol. in-ta pishchevoy prom-sti, 1953, No 13, 101-105

Abstract: Studies of qualitative changes in turbid beer wort on 5-minute centrifugation in laboratory precipitation centrifuge at 2,000 RPM. The indexes thus obtained are compared with those of clear wort (CW) collected from outlet of filter-press after filtration of turbid liquor that was concurrently subjected to separation. Residue of insolubles in CW was the same within 0.01-0.03 g/100 ml. Turbidity of separated CW is almost 2 times less due to more complete removal of colloids both prior to and after hop treatment of the wort. Color and pH of CW are the same. Protein content and dextrin content of CW are practically the same.

Card 1/1

MESHCHERYAKOV, V.M., kand.tokhn.nauk, dotsent; ZAZIMKO, V.G., inzh.

New type of pipe laying without ducts using insulation fill. Trudy  
DIIT no.36:38-42 '62. (MIRA 16:10)

ZAZIMKO, N., inzhener.

Characteristics of the flight operation of the An-2 airplane  
during aeronautical chemical work. Grazhd.sv. 12 no.9:22-24  
S '55. (MIRA 10:7)  
(Aeronautics in agriculture) (Airplanes--Piloting)

ZAZIMKO, L.A.

"Status signs" in Salmonella typhimurium strains isolated  
during epizooty in white mice. Zhur. mikrobiol., epid. i immun.  
42 no.11:26-29 N '65. (MIRA 18:12)

1. Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut.  
Submitted Jan. 8, 1965.

**ZAZIMKO, D.P.**

Experimental investigation of the structure of flow in the ring  
diffuser of a centrifugal compression stage. Gas. prom. 4 no.4:  
46-53 Ap '59. (MIRA 12:6)  
(Gas flow) (Air compressors)

19816

Experimental investigation of ...

S/143/60/000/011/005/009  
D218/D302

ASSOCIATION: Krymskiy pedagogicheskiy institut (Crimean Pedagogic  
Institute)

SUBMITTED: January 29, 1960

✓

Card 6/6

K921A

Experimental investigation of ...

S4143/60/000/011/005/009  
D218/D302

This also has an influence on the structure of the flow. On taking measures of the angles of the flow at the radius 130 mm it was noted that there were large oscillations of the pointers of the flat type angle meters. The experiments were carried out with unchanged geometrical sizes of the transient part and with the channels of the reverse guiding channel. It was found that hydraulic losses and the structure of the flow depend on the type of the rotor wheel. It is expected by the author that on investigating a given stage with different types of wheels at the same values of  $b_3/b_2$  somewhat different quantitative dependences between the  $\psi_{st}^*$ ,  $\psi_p^*$ ,  $\eta^*$  could be obtained. However, the quantitative part of the investigation should remain unchanged. The author concludes that the most favorable ratio  $b_3/b_2$  for the stages with the blade less guiding channel is equal to 1. Already at  $b_3/b_2 \gg 1.1$  there are considerable losses of pressure and a decrease in efficiency of the wheel and the stage in the whole. There are 8 figures.

Card 5/6

Experimental investigation of ...

29216  
S/143/60/000/011/005/009  
D218/D302

crease of the ratio  $b_3/b_2$  the turbulence of the flow is increased both at the front and especially at the rear walls of the guiding channel. This causes the decrease of  $\psi_{2F}$  and  $\psi_{2st}$  at the walls and in the middle of the flow, the explanation being that there is a sudden widening of the flow at the wheel outlet. The reverse influence of the guiding channel on the work of the wheel was studied by taking measurements of the full and of the static pressures and of the angles of flow at 5 points on the width of the channel. It was established that at all radii of the walls of the guiding channel there were backward flows. At greater ratios  $b_3/b_2$  the turbulences were smaller. The turbulences were greater at the rear wall than those at the front wall. This was explained by the appearance of additional turbulences at the turning of the flow at  $180^\circ$  round a relatively thin disc at the outlet. There were ventilation losses in the axial gaps between the rotor wheel and the guiding channel, and the friction losses of gas against the walls of the channel. These are increased with the increase in size of the axial gap.

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19215

S/145/60/000/011/005/009  
D218/D302

Experimental investigation of ...

with respect to the ratio  $b_2/b_3$ . The quantities  $\psi^*$  and  $\eta^*$  were determined from the expressions

$$\psi_F^* = \frac{\psi_F}{\psi_F'} \quad \text{and} \quad \eta^* = \frac{\eta}{\eta'}$$

where  $\psi_F'$  and  $\eta'$  are coefficients of the full pressure at  $b_3/b_2 = 1$ ; the efficiency from

$$\eta = \frac{H_T}{H_F}$$

where  $H_T$  - a theoretical pressure of the stage

$$H_T = \frac{k}{k-1} R(T_{st} - T_0),$$

where  $T_0$  - the braking temperature at the outlet of the stage. It was deduced by the author from the experiments that with the in-

Card 3/6

29216

Experimental investigation of ...

S/143/60/000/011/005/009  
D218/D302

gap between the rotor and the casing was increased accordingly. The rotor wheel had the blades bent backwards with an angle  $\beta_2 = 32^\circ$  at the outlet. The reverse guiding channel consisted of 16 rectangular channels, with their width and height 40 and 20 mm respectively. The experiments were carried out at a uniform velocity 1200 rpm, corresponding to  $u_2 = 160$  m/sec. At this speed the numbers were  $Re = 3 \cdot 10^6$ ,  $M = 0.17$  to  $0.27$  respectively. The characteristics obtained are given in graphic form. The pressure coefficients are determined from

$$\psi_F = \frac{H_F}{\frac{u_2^2}{2g}} \quad \text{and} \quad \psi_{st} = \frac{H_{st}}{\frac{u_2^2}{2g}},$$

where  $H_F$  and  $H_{st}$  are the full and static pressures respectively.

Further graphs show the variation of the average values of the coefficients of the full pressure  $\psi^*$  and that of the efficiency  $\eta^*$

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29216

S/143/60/000/011/005/009  
D218/D302

26.2120

AUTHOR: Zazimko, D.A., Candidate of Technical Sciences

TITLE: Experimental investigation of the influence of the  
guiding channel outlet width on the characteristics  
of a radial compressor stage

PERIODICAL: Izvestiya, vysshikh uchebnykh zavedeniy. Energetika,  
no. 11, 1960, 78 - 84

TEXT: The problem consisted of an experimental investigation of  
the characteristics of the rotor and that of the bladeless guiding  
channel in a wide range of the peripheral velocity  $u_2$  at the ratios  
 $b_3/b_2 = 1, 1.2, 1.35$  and  $1.53$  respectively. The experimental stage  
consisted of a sucking funnel, a rotor, a blade-less guiding chan-  
nel, an intersected-ring for measuring the width of the channel, a  
reverse guiding channel, a chamber, and a turbo duct with the  
throttle valve. When increasing the width of the channel  $b_3$ , the

Card 1/6

ZAZIMKO, D. A.:

Zazimko, D. A.: "Investigation of the effect of the number of spiral channels of a control apparatus on the characteristics of a radial compressor stage." Min Heavy Machine Building USSR, Central Sci Res Boiler and Turbine Inst imeni I.I. Polzunov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science)

SO: Knizhnaya letopis', No 27, 1956. Moscow. Pages 94-109; 111.

SOV/96-59-8-18/27

An Experimental Investigation of the Flow Structure in the Annular  
Diffuser of a Radial Compressor Stage

guide vanes. Such data will aid the design of runners and  
annular diffusers. There are 8 figures and 1 table.

ASSOCIATION: Tsentral'nyy Kotloturbinnyy Institut (Central Boiler  
Turbine Institute)

Card 4/4

SOV/96-59-8-18/2"

An Experimental Investigation of the Flow Structure in the Annular Diffuser of a Radial Compressor Stage

pressure as function of flow rate is given in Fig 8. The reasons for the difference between theory and practice are discussed. Curves of changes in the angles of flow over the width and radius of the diffuser channel are given in Figs 4 and 7 and here again distribution is not uniform. The shape of the curves is discussed. The general conclusion is that the flow structure in an annular diffuser is very complicated and depends on the flow structure at the outlet from the runner (that is on the type of runner), on the influence of the guide vanes and on the operating conditions of the stage. The existing method of designing a diffuser is based on the assumption that the flow is uniform both at the outlet from the runner and in the channels of the diffuser. Hence the method can give satisfactory results only in particular cases. It is necessary to accumulate experimental data about the flow structure at the outlet from the runner and at different sections in the diffuser channel when operating with different types of runner and

Card 3/4

SOV/96-59-8-18/27

An Experimental Investigation of the Flow Structure in the Annular Diffuser of a Radial Compressor Stage

same speed of 11000 rpm, corresponding to a runner peripheral velocity of 150 m/sec. Figs 2, 3 and 4 show graphs of changes in the magnitude measured across the width of the diffuser channel at different distances from the runner. The graphs in Fig 5, 6 and 7 show changes in the same magnitudes over the radius of the channel in three radial planes parallel to the diffuser walls. The graphs given in Fig 2 show that under all the conditions stated the distribution of total pressure across the width of the channel is irregular at any radius. The reasons for this are explained. Variations in the total pressure across the width of the channel decrease as the distance from the runner increases, and are least at the outlet from the channel. This also is explained. The changes in the picture introduced by increasing the flow rate are described. The graphs in Fig 5 include calculated curves of the static pressure, which are seen to differ from the experimental values. The mean difference between the curves under all conditions is 2 to 3%. A graph of the ratio of experimental to calculated

Card 2/4

SOV/96-59-8-18/27

**AUTHOR:** Zazimko, D.A., Candidate of Technical Sciences

**TITLE:** An Experimental Investigation of the Flow Structure in the Annular Diffuser of a Radial Compressor Stage

**PERIODICAL:** Teploenergetika 1959, Nr 8, pp 65-71 (USSR)

**ABSTRACT:** Not enough is known about the flow structure in the diffuser of a compressor stage: the object of the present work was to make an experimental study. The pressure and velocity fields and the angles of attack in various sections of a diffuser channel with a constant circumferential velocity at the outlet from the runner were studied over a wide range of air flow. A number of radial compressor stages were tested, all generally similar to the sectional drawing given in Fig 1. The main characteristics of the runners are given and information about the stage geometry is tabulated. Measurements were made of the total and static pressures and of the flow angles at five points across the width of the channel at the inlet, at the mean radius and at the outlet from the diffuser channel; the positions are shown in Fig 1. The procedure used in making the measurements is described. All the stages were tested at the

Card 1/4

SAZIMKO, D.A., kand.tekhn.nauk

Spiral-type outlet device with rotary vanes for a centrifugal  
compressor stage. Sudostroenie 28 no.3:23-27 Mr '62.

(MIRA 15:4)

(Compressors)

23950

S/096/61/000/008/001/005  
E194/E155

An experimental study of a radial compressor stage with a new type of spiral guide vane

somewhat the compressor stage should operate stably over a wide range of flow with an efficiency of about 86-90%. The design described is particularly suitable for single-stage compressors. The guide vane assembly for multi-stage compressors will require special adjusting devices which may be similar in design to that described here.

There are 3 figures.

ASSOCIATION: Krymskiy pedagogicheskiy institut  
(Crimean Pedagogical Institute)

Card 4/8

23950  
S/096/61/000/008/001/005  
E194/E155

An experimental study of a radial compressor stage with a new type of spiral guide vane

concerned with the design and study of the discharge guide vane equipment, interest centred upon the so-called two-link compressor stage consisting of an inlet duct runner and discharge guide vane system. Test results with two- and three-link stages are plotted in Figs. 2 and 3. Fig.2 gives the static head as a function of the discharge factor, and Fig.3 the efficiency as a function of the discharge factor. The index 2 relates to two-link, and index 3 to three-link stages. Each curve corresponds to a certain angle of blade installation during the conduct of the tests. The bold curves correspond to two-link, and the dotted curves to three-link stages. It will be seen that over a fairly wide range of flow-factors high static heads and efficiencies are obtained. The design of the guide vane assembly is still somewhat imperfect and the header chamber beyond the back guide vane equipment is rather large. Consequently the efficiency was affected, and the maximum efficiency of the three-link stage was not greater than 86%. However, the results confirm that when the design has been developed

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23950

S/O96/61/000/008/001/005  
E194/E155

An experimental study of a radial compressor stage with a new type of spiral guide vane

consists of the inlet section 7 with dowel 8 and main part 9. The blades swing about the dowels 8 which are inserted in suitable apertures in the lower disc. The blades are rotated by the handle 10 and draw bars 11 which are screwed to the main part of the blade. The construction of a mechanism for simultaneous adjustment of all blades is shown in Fig.12. The equipment may be designed with any number of adjustable blades. The maximum number depends on the range of variation of the angle of attack, and the smaller this range the greater the number of blades. The experimental equipment with adjustable guide vanes was tested on the rig of the TsKTI (Central Boiler and Turbine Institute). No particular difficulties were encountered. The equipment is easy to assemble and dismantle. On the basis of previous experience, 13 guide vanes were used, and the tests were made at a runner speed of 12 000 r.p.m., giving a peripheral discharge speed of 165 m/sec. The air flow was varied from maximum to minimum and the range of stable operation was covered. As the work was mainly

Card 2/8

23950

S/096/61/000/008/001/005  
E194/E155

26.2/22

AUTHOR: Zazimko, D.A., Candidate of Technical Sciences  
TITLE: An experimental study of a radial compressor stage  
with a new type of spiral guide vane.  
PERIODICAL: Teploenergetika, 1961, No.8, pp. 23-27

TEXT: The main losses in radial compressors occur in the stationary guide ducts and guide vanes. At other than rated conditions the angle of discharge of flow from the runner differs from the angle of installation of the guide vanes. When turbines are required to operate at varying loads the characteristics of the compressor stage may be improved by arranging for the angle of installation to be adjustable. A new design of this kind is described in the present article. The general view of an 8-duct guide vane system with adjustable blades is given in Fig.1a. The assembly consists of five main parts: an upper covering disc 1, a shaped guide ring 2, adjustable blades 3, a guide 4, and a lower disc 5. The flow path consists of the spiral ducts aa-bb, the straight line diffusers bb-cc and the transition sections cc-dd. The construction of a blade is shown in Fig.1b, and

Card 1/8

An experimental investigation of the...

27088

S/143/61/000/002/002/006  
A207/A126

The mounting angles of the blades at the outlet from the wheel changed within the limits of  $14^\circ$  to  $90^\circ$ . The present article deals with the results of tests on the step with a wheel of  $\beta_2 = 90^\circ$ . The experimental data could not confirm the assumption that the peripheral speed was evenly distributed along the width of the diffuser, as accepted in the calculations. Investigations showed that the flow in the bladeless diffuser, when working with different types of wheels, is rather complex and depends on the conditions of the work of the stage, the structure of the flow at the outlet of the wheel, the effect of the transient section and the reversely-directing apparatus. The existing method of calculation of the bladeless diffuser, based on the assumption that the flow is uniform at the outlet of the wheel and in the cross-sections of the diffuser, only occasionally offer satisfactory results, corresponding closely to the experimental values. In order to perfect the calculation method, it is suggested accumulating data on the structure of the flow in the diffuser cross-sections when in work, in stages with various types of reversely directing apparatus and working wheels. There are 8 figures and 1 table.

ASSOCIATION: Krymskiy pedagogicheskiy institut (The Crimean Teacher's College)

SUBMITTED: April 5, 1960

Card 2/3

27088  
S/143/61/000/002/002/006  
A207/A126

26.2120

AUTHOR: Zazimko, D. A., Candidate of Technical Sciences

TITLE: An experimental investigation of the flow structure in a bladeless diffuser of the centrifugal compression stage

PERIODICAL: Energetika, no. 2, 1961, 79 - 88

TEXT: The author points out that the structure of the flow in the diffuser depends on the following factors: working conditions of the stage and type of working wheel, the relation of channel width of the diffuser  $b_d$  to the width of the working wheel  $b_2$  at the outlet, the design of the transitional section of the diffuser. An investigation was carried out at constant peripheral speed  $u_2$  at the outlet of the wheel and within a wide range of the field consumption of full and static pressures, rates and flow angles in several cross-sections of the diffuser. A number of compressor stages were tested (Fig. 1). Each stage consisted of a suction funnel 1, bladeless diffuser 3, reverse direction apparatus 4, collection chamber 5, pumping pipe line with a throttle valve and various types of working wheels 2. The working wheels had the same inlet  $r_1$  and outlet  $r_2$  radii. Some of the wheels had the same angle of the blade mounting at the inlet  $\beta_1$ , equal to  $40^\circ$ .

Card 1/3

ZAZIMKO, D.A.

ZAXIMKO, D.A., kand.tekhn.nauk

Experimental investigation of the flow structure in the bladeless diffuser of a centrifugal compressor stage. Izv. vys. ucheb. zav.; energ. 4 no.2:79-88 F '61. (MIRA 14:3)

1. Krymskiy pedagogicheskiy institut.  
(Compressors)

CHUKMASOV, S.F.; ZASIMKO, A.I.; PUZYR'EV, P.I.

Comparative studies of the pressing process of lightweight  
scrap metal in the "Zilig" and SPA-1000 pagotting presses.  
Stal' 25 no.8:767-769 Ag '65. (MIRA 18:3)

CHUKMASOV, S.F.; ZAZIMKO, A.I.

Investigating the performance of a hydraulic fagoting press.  
Kuz.-shtam.proizv. 4 no.8:27-30 Ag '62. (MIRA 15:8)  
(Hydraulic presses) (Scrap metals)

CHUKMASOV, S.F.; TSEKHNOVICH, L.I.; PUZYR'KOV, P.I.; ZAZIMKO, A.I.

Investigating forces acting in a baling press chamber. Koz.-  
shtam. proizv. 7 no.8:23-26 kg '65. (MIRA 18:9)

CHUKMASOV, S.F.; ZAZIMKO, A.I.

Vibepressing of lightweight metal scrap. Kuz.-shom.proizv.  
5 no.5:14-15 My '63. (MIRA 16:9)

S/072/62/000/005/002/002  
B105/B101

AUTHOR: Zazikashvili, A. D.

TITLE: Uses of the "electro-contact" level gauge

PERIODICAL: Steklo i keramika, no. 5, 1962, 30 - 31

TEXT: In the Borzhomskiy stekol'nyy zavod (Borzhomi Glassworks) the molten glass level in glass-melting furnaces is controlled by means of float gauges. Since the floats are corroded at high temperatures and the molten glass loses its purity, the level gauge has to be corrected day by day. The "electro-contact" level gauge designed at the laboratoriya avtomatiki (Laboratory for Automation) of the NIIES was installed in furnace no. 2 of the above mentioned glassworks in June, 1961, and yielded satisfactory results after two months testing at 1470°C. The same level gauge fitted in the continuous flow furnace no. 1 worked smoothly for three months. The "electro-contact" level gauge ensures high precision in measuring and controlling the molten glass level (within limits of  $\pm 0.15$  mm). Disadvantages of this design of level gauge due to the complicated character of control during operation and the difficulty of stripping and assembling

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spring and winter wheats, and between 22.1 and 11.4 per cent, when they were taken directly from various crops.

From the results of comparative studies it is concluded that one and the same virus, which may be appropriately called 'virus of winter wheat mosaic', is responsible for mosaic in both the winter wheat and of the spring cereals, in spite of differences in the symptoms. On the basis of the symptoms observed in spring crops, the two closely related viruses of winter wheat mosaic and pupation disease can now be clearly differentiated. Profuse shooting appears in spring crops infected by the virus of pupation disease but not in those attacked by that of winter wheat mosaic. On winter wheat and rye, however, the viruses are not so easily distinguished, as profuse shooting may result from infection with either.

ZARUKO (V. K.) & SHTUKOVA (Mme G. M.). Mosaic of spring cereals in the Voronezh district.—*C.R. Acad. Sci. U.R.S.S.*, N.S., xiv, 3, pp. 474-478, 2 figs., 1940.

In the present paper the symptoms of mosaic, previously reported on winter wheat and rye in the Voronezh district of the U.S.S.R. (*R.A.M.*, xix, p. 268), are described on spring crops, among which hard and soft wheats, oats (*Avena sativa*, *A. byzantina*, and *A. fatua*), and barley were attacked. The symptoms produced on spring cereals differ in some respects from those on winter wheat, although the pattern of the injured leaf blade is of the same type. The colour of the mosaic spots varied with the crop and even with the variety: it was yellow in hard wheats (often of a lemon shade) and green in soft; in oats and barley it was greenish-yellow, one or other of the two colours being predominant at times. In spring crops, the blade of the upper leaves was more affected with mosaic than those of the lower; in winter wheat the upper leaves were less affected than the lower ones or not at all. The diseased plants are retarded in their development and only rarely do they form grain. Most succumb at or before the earing stage. Profuse branching, characteristic of mosaic-infected winter wheat and of spring wheat infected with 'zakorkivanie' (yeast disease; see preceding abstract), was never observed in spring wheat, barley, or oats, nor were there antholysis and proliferation of flowers, typical of the latter disease in both winter and spring crops. No protein crystals were found in affected spring crops. All attempts to transmit the mosaic disease through the juice failed. Experiments with infected soil successfully transmitted to spring cereals by the insect *Delia schultzei* [ibid., xix, p. 268], 67.5 per cent. of the experimental plants developing infection when the insects were first fed on winter wheat 'rosettes', 32.5 per cent. when they were fed on infected winter wheat, 16.2 per cent. when the insects were taken directly from stubble of

oats planted on 6th May, 1938, were more severely affected (10 per cent.) than those sown on 24th April (3-6).

Studies on the life-cycle of the insect vector (*Deltocephalus striatus*) of the wheat mosaic virus in relation to the phenology of the host pointed to the third generation, hatched in the autumn, as the principal agent of infection: it develops mainly among the stubble of late spring crops and on plots overgrown with cereal weeds, such as *Setaria viridis* and *S. glauca*. The critical period for the infection of the winter crop thus extends from the germination of the seed in the autumn until the advent of persistent frosts. On the other hand, the first (spring) generation of the insect is the only one of any importance in the infection of spring crops (oats in these experiments). Control measures should be based on cultural practices tending to reduce the incidence of infection on winter crops (the chief sufferers from the disease), e.g., early ploughing of fallow ground, eradication of weeds, and destruction of 'volunteer' plants, which constitute an important link in the developmental cycle of mosaic. The attention of plant-breeders should be directed in the first instance towards the establishment of resistance in winter varieties, after which the freedom of the spring crops from disease will follow automatically.

ZAZHURNYI (V. K.) & SITNIKOVA (Mina G. M.). Natural ways of transmission of the Winter Wheat mosaic virus. *C.R. Acad. Sci. U.R.S.S.*, N.S., xxix, 5-6, pp. 429-432, 1940.

In winter wheat crops in the province of Voronezh, U.S.S.R., the symptoms of mosaic [R.I.M., xx, p. 167] were observed during the period of the writers' observations from 1935 to 1939 to appear in the autumn, over 10 per cent. infection being present by the winter in seasons when a warm, damp spell supervenes after the harvest. The next year the proportion of diseased plants increases considerably through latent infection, showing that the virus overwinters in the invaded stands.

Early sowing was found to predispose wheat crops to mosaic, the incidence in stands sown on 1st, 5th, and 10th September, 1938, being 13.8, 5.8, and 5.4 per cent., respectively. On the other hand, spring

ZAKHURILHO (V. K.). Pea varieties with pods resistant to *Ascochyta* blight. -- *C. R. Acad. Sci. U.R.S.S., N.S.*, xlix, 4, pp. 351-352, 1940.

All the pea varieties, numbering about 100, tested for their reaction (200 plants and 400 pods of each variety) to *Ascochyta pisi* at the Kamennostepnaya Plant Breeding Station, Voronezh, U.S.S.R. [*R.A.M.*, xvii, p. 427] in 1935, proved to be highly susceptible in respect of their vegetative parts, but there were noticeable differences in the effect of the pathogen on the pods. For instance, of the 20 varieties of which the reactions are shown in tabular form, six contracted under 5 per cent. pod infection, viz., Manshold, Solo, Folger Heine, Waxy 019, Concordia, and Mench, with 4.0, 4.0, 3.5, 2.7, 2.5, and 2.8 per cent., respectively, though the incidence of spotting on the vegetative parts in the same varieties amounted to 89.5, 100, 98.5, 91.5, 98.5, and 100 per cent., respectively. Not only was the actual percentage of pod infection in these varieties low, but the character of the spotting was very mild, a matter of special importance in procuring sound seed.

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 ZERNIKO (V. K.) & SKRIBOVA (M. G. M.). *Взаимоотношения между зимним мозаиком озимой пшеницы и его переносчиком — полетом трипсом (Deltocephalus striatus L.). [The relation of the virus of winter Wheat mosaic to its vector (Deltocephalus striatus L.).]—C.R. Pan-Sov. V. I. Lenin Acad. agric. Sci., Moscow, vi, 11, pp. 37-39, 1941.*

In experiments carried out in 1940 at the Plant Protection Station, Voronezh, the virus of winter wheat mosaic [R.A.M., xxi, p. 251] was successfully transmitted through *Deltocephalus striatus* [ibid., xx, p. 387], but not through *Delphax striatella*, *Cicadula nuntiata*, *Eurigaster integriceps*, *E. maurus*, *E. austriacus*, *Adia acuminata*, or *Hoplothrips tritici*. *Deltocephalus striatus* transmitted the virus from winter wheat to winter and summer wheats, oats, barley, rye, and millet [*Panicum miliaceum*] and from some of these hosts to others, indicating that mosaic in all these hosts was caused by the virus of winter wheat. The incubation period of the virus in the insect (average of 75 insects) varied from 5 to 35 days, but was mostly 15 to 16; in the plant, after infection, it varied with the air temperature, lasting 22 days at a daily average of 10° to 15° (C.), 15 at one of 15° to 20°, nine at one of 20° to 25°, and up to 25 or 30 at temperatures below 10°. The insects retained their infectivity for a considerable time: 78.6 per cent. for five days, 7.9 per cent. for 40, and individual insects for as long as 60. Insects of both sexes and in all stages of development were capable of transmitting the virus, but only the first three larval stages were receptive to it. In general, long feeding times were essential for the insects to become infected; thus, 6.5 per cent. of the larvae in the first stage became infected after 24 hours, 11.7 per cent. after two days, and 51.4 per cent. after five, but in no case did all the feeding insects become infected. The progeny of infective females was sterile, indicating that the virus was not transmitted through the eggs. These results lend support to previous conclusions that contact must be avoided between sources of infection in the field (stubble of spring cereals) and newly hatched generations of the vector, of which the most dangerous is the third, for it transmits the disease to the young stands of winter wheat where the virus overwinters. It is, therefore, of the greatest importance to destroy the infected stubbles by deep ploughing immediately after the harvest of spring crops and before the emergence of winter wheat.

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| 17 AND 17A (REV. 1-51)<br>PREVIOUS EDITIONS OBSOLETE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 18 AND 17B (REV. 1-51)          |  |
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| <p><b>ZAKHARULO (V. K.) &amp; SITNIKOVA (Nina G. M.).</b> Diagnosis of virus diseases of cereals.—<br/> <i>C.R. Acad. Sci. U.R.S.S., N.S.</i>, xxx, 7, pp. 664-686, 1 fig., 1941.</p> <p>By microscopic investigations on healthy wheat, rye, barley, oats, and other cereals and on similar plants attacked by winter wheat mosaic [<i>R.A.M.</i>, xx, p. 532] and pupation disease [<i>Ibid.</i>, xxi, p. 9], and by a comparison of the results with data on other virus diseases of cereals, it has been possible to give diagnostic anatomical and cytological characters for certain virus diseases. Wheat viruses 1 and 1A of McKinney [<i>Ibid.</i>, iii, p. 452] give vacuolar bodies but no phloem necrosis or protein crystals. Both vacuolar bodies and phloem necrosis are characteristic of winter wheat mosaic, while pupation disease gives protein crystals in addition. External appearance alone affords no basis for identification. Using this method winter wheat mosaic was identified in samples from Moguilav, Khasan, Orel, Kurak, Voronezh, Saratov, Kuibyshev, Autonomous Soviet Socialist Republic of Volga Germans, Somy, Kharkov, Zaporozhie, Rostov, and Kramodar.</p> |  |                                 |  |
| 19-24<br>METALLURGICAL LITERATURE CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | 25-29<br>SUBJECT CLASSIFICATION |  |
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ZAZHURILO, V. K.

Zazhurilo, V. K., Kimental', D. F., and Gerlenko, M. V. "Improvement of Methods of Estimating Damage Caused to Oats by Puccinia coronifera," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuz-nogo Instituta Zashchity Rastenii za 1935 Goda, 1936, pp. 180-182. 423.92 1541

SO: SIRA S. 19-53, 15 DEC 1953

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ZAZHURILLO, V. K.

SITNIKOVA, G. M. [Co-author] See: ZAZHURILLO, V. K. "Diagnosis  
of Virus Diseases of Cereals," 1941.

SOURCE: SIRA SI-90-53, 15 Dec. 1953.

ZAZHURKO, V. K.

SITNIKOVA, G. E. [Co-author] See: ZAZHURKO, V. K. "Waste of  
Wheat and Other Cereals, the Damage Caused by It and Methods  
of Dissemination," 1941.

SOURCE: SIRA 81-95-53, 15 Dec. 1953.

ZAZHURILLO, V. K.

SITNIKOVA, G. M. [Co-author] See: ZAZHURILLO, V. K. "Natural  
Ways of Transmission of Winter Wheat Potyvirus," 1940.

SOURCE: SIRA SI-90-53, 15 Dec. 1953.

ZAZHURILLO, V. K.

SITNIKOVA, G. I. [Co-author] See: ZAZHURILLO, V. K. "Mosaic  
of Spring Cereals in the Voronezh Oblast" 1940.

SOURCE: SIRA SI-90-53, 15 Dec. 1953.

ZAZHURILLO, V. K.

SITNIKOVA, G. M. [Co-author] See: ZAZHURILLO, V. K. "The Relation of the Virus of Winter Wheat Mosaic to its Vector (Deltocephalus striatus)," 1941.

SOURCE: SIRA SI-90-53, 15 Dec. 1953.

ZAZHURILO, V. K.

ZAZHURILO, V. K. "Bacteriosis of Legumes and Their Injuriousness,"  
Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta  
Zashchity Rastenii za 1935 Goda, 1936, pp. 121-124. 423.92  
1541

So: Sira - Si - 90 - 53, 15 December 1953

ZAZHURILO, V. K.

ZAZHURILO, V. K. "The Study of *Uromyces pisi*," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastonii za 1935 Goda, 1936, pp. 118-121. 423.92 L541

So: Sira - S1 - 90 - 53, 15 December 1953

ZAZHURILLO, V. K.,

and SITNIKOVA, G. M. "The Relation of the Virus of Winter Wheat Mosaic to Its Vector  
(*Deltocephalus striatus* L.)," Doklady Vsesoiuznoi Akademii Sel'skhozaiastvennykh  
Nauk imeni V. I. Lenina, vol. 6, no. 11, 1941, 1941, pp. 27-29. 20 Ak1

So: Sira Sl-90-53, 15 Dec. 1953

ZAZHURILO, V. K.

ZAZHURILO, V. K. "Fusariosis of Legumes and Its Injuriousness,"  
Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta  
Zashchity Rastenii za 1935 Goda, 1936, pp. 104-106. 123.92  
L541

So: Sira - Si - 90 - 53, 15 December 1953

ZAZHURILOV, V. K. (Co-author)

See: KIMENTAL', D. F.

ZAZHURILO, V. K. "Improvement of Methods of Estimating Damage  
Caused to Oats by Puccinia coronifera," 1936.

So: Sira- 81 - 90 - 53, 15 December 1953

ZAZHURILLO, V. K.

ZAZHURILLO, V. K. "Testing Hydrogen Sulfide and Aluminum Sulfide as Disinfectants of Bean Seeds for Bacterium phaseoli E. F. Sm.," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1936 Goda, part 1, 1937, pp. 135-137. 423.92 L54I

SO: SIRA - SI. 90-53. 15 Dec. 1953

ZAZHURILLO, V. K.

ZAZHURILLO, V. K. "Losses Caused by Diseases of Leguminous Crops," Izvestiya Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1936 Goda, part 1, 1937, pp. 134-135. 423.92 L541

SO: SIRA - SI. 90-53. 15 Dec. 1953.

ZAZHURILLO, V. K.

ZAZHURILLO, V. K., and GORLENKO, M. V. "Mosaic of Wheat in Voronezh Oblast," in Virus Diseases of Plants. Collection 2, Publishing Affiliate of the All Union Institute of Plant Protection, Moscow, 1938, pp. 133-138. 464.32 V96.

SO: SIRA - SI. 90-53. 15 Dec. 1953

ZAZHURILLO, V. K.

and SITNIKOVA, G. M. "Diagnosis of Virus Diseases of Cereals," Comptes Rendus  
(Doklady) de l'Academie des Sciences de l'URSS, vol. 30, no. 7, 1961, pp. 661-666, 511  
P4/44

So: Sira S1-90-53, 15 Dec. 1953

ZAZHURILLO, V. K.

and SIENIKOVA, G. M. "Mosaic of Wheat and Other Cereals, the Damage Caused by It and Methods of Dissemination in Nature," in Virus Diseases of Plants and Measures for Their Control. Works of the Conference on Virus Diseases of Plants, 1940, Publishing House of the Academy of Science USSR, Moscow, 1941, pp. 153-164 So8

So: Sira 31-90-53, 15 Dec. 1953

ZAZHURICH, V. K.

and SITNIKOVA, G. M. "Natural Ways of Transmission of Winter Wheat Mosaic Virus,"  
Cooperates Rendus (Doklady) de l'Academie des Sciences de l'URSS, vol. 20, no. 5-6, 1940,  
pp. 429-432. 511 P444

So: Sira Sl-90-53, 15 Dec. 1953

ZAZHURILLO, V. K.

"Pea Varieties with Pods Resistant to *Ascochyta pisi* Lk.," Comptes Rendus (Doklady)  
de l'Academie des Sciences de l'URSS, vol. 29, no. 4, 1940, pp. 351-352. 511 F444

So: Sira S1-90-53, 15 Dec. 1953

ZAZNURCHIO, V.K.

and SITNIKOVA, G. M. "Hemato of Spring Cercaria in the Voronezh (blast)." Soviet  
Rendus (Doklady) de l'Academie des Sciences de l'URSS, vol. 26, no. 5, 1960,  
pp. 474-432. 511 Pp. 4

So: Sira S1-90-53, 15 Dec. 1953

ZAZHURILO, V. K.

ZAZHURILO, V. K., and GORLENKO, M. V. "Wheat Kousic in Veronezh Oblast,"  
Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii  
za 1936 Goda, part 1, 1937, pp. 129-132. 423.92 I541

SO: SIRA - SI. 90-53. 15 Dec. 1953.

ZAZHURKO, V. K.

Mr., Phytopathological Lab., Voronezh Plant Protecting Sta., -1939-41.

"Anatomical and Cytological Modifications in Cereals Attacked by Mosaic Virus," Dok. AN, 24, No. 2, 1939;

"Mosaic of Winter Wheat," Ibid., 25, No. 9, 1939;

"Mosaic of Spring Cereals in the Voronezh District," Ibid., 26, No. 5, 1940;

"Phylogenetical Significance of Scleroids in Seed Coats of Gramineae," Ibid., 29, No. 2, 1940;

"Pea Varieties with Pods Resistant to Ascochyta blight,"

"Natural Ways of Transmission of the Winter Wheat Mosaic Virus," Ibid., 29, Nos. 5-6, 1940;

"Diagnosis of Virus Diseases of Cereals," Ibid., 30, No. 7, 1941.

ZAZHURNIO, V. K.

GORDONNO, M. V. [Co-author] See: ZAZHURNIO, V. K. "Growth of  
Wheat in Voronezh Oblast," 1938.

Source: SIRA SI-90-53, 15 Dec. 1953

ZAZHURILLO, V. K. and SITNIKOVA, G. M.

"Mosaic of Wheat and Other Cereals, Its Destructiveness and Method of Spreading Under Natural Conditions", Trudy Soveshcheniya po virusnym bolezniam rasteniy, 1941.

LEVIN, B.M., kand. tekhn. nauk; DROVYANNIKOVA, V.I., inzh.;  
ZARHURILLO, T.I., inzh.

Study of the process of the precipitation of monodispersed  
suspensions in small concentrations. Trudy MEIT no. 17/00144-159  
'63. (MIRA 17:6)

ZAZHOGINA, G. N.

Cand Med Sci - (diss) "Problem of the effect of previous caffeinization and partial decortication of the brain on the course of diphtherial intoxication in dogs." Rostov-na-Don, 1961. 19 pp; (Rostov-na-Don State Med Inst); 300 copies; price not given; (KL, 10-61 sup, 224)

ZAZHITSKI, Yuliush. Cand Agr Sci -- (diss) "Dynamics of <sup>formation in</sup> ~~the~~ sprouting of  
perennial grasses and its relationship to conditions of cultivation, utilization  
and age." ~~Len~~ Len-Pushkin, 1959. 16 pp (Min of Agr RSFSR. Len Agr Inst.  
Chair of Cultivation of Meadows), 250 copies (KL, 50-59, 128)

ZAKHARCHENKO, V. A., et al.

Graphical representation of a transient process in the circuit of  
a single-phase rectifier bridge with an inductive load. Study  
UNIT 42:145-154 '63.

Calculation of transients in the load circuit of a single-phase  
bridge rectifier. Ibid.:155-166 (MIRA 18:10)

LITVINOV, I.R.; ~~ZAZHIRKO~~, V.N., assistant; BABICH, V.M., starshiy  
prepodavatel'

Slippage-preventive circuit of MB series electric locomotives.  
Elek. i tepl. tiaga 4 no. 9:8-11 8 '60. (MIRA 13:12)

1. Glavnyy inzhener sluzhby lokomotivnogo khozyaystva Tomskoy  
dorogi (for Litvinov). 2. Tomskiy elektromekhanicheskiy  
institut inzhenerov zheleznodorozhnogo transporta (for Zazhirko,  
Babich).

(Electric locomotives)

LISOVSKIY, A.S.; TSUKANOV, T.T.; BORODAVKIN, M.A.; ZAZHIRKO, V.N.;  
LIBUNOV, V.N.; SOLOVENKO, G.I.

Remote control of dump car unloading from the operator's  
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are discussed: clinometer (gradient recorder), Adrianov compass, Stefan compass, transit, goniometer, three leveling devices, plane table. There are 102 figures, 9 tables (in the appendix) and 14 Soviet references.

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ZAZHIREY, DMITRIY IVANOVICH

PHASE I BOOK EXPLOITATION

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Zazhirey, Dmitriy Ivanovich; Pankin, Ivan Aleksandrovich; and  
Semenov, Sergey Stepanovich

Geodeziya (Geodesy) Moscow, Avtotransizdat, 1957. 140 p. 8,000 copies printed.

Ed.: Mordvinov, V.S.; Kogan, F.L.

PURPOSE: This is a textbook approved by the RSFSR Ministry of Highways and Motor Transport, devoted to problems of road building. The book is intended for use in schools training highway engineering personnel.

COVERAGE: The book is a practical study of geodetic problems related to road building, such as the orientation of lines, the measurement of horizontal angles, spotting of lines on the ground, leveling and lay-out work. The book cites numerous practical examples to illustrate certain theoretical principles. The following instruments

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~~ZAZHIBY, Dmitriy Ivanovich~~; PANKIN, Ivan Aleksandrovich; SEMENOV, Sergey  
Stepanovich; MORDVINOV, V.S., redaktor; KOGAN, F.L., tekhnicheskii  
redaktor

[Geodesy] Geodezika. Moskva, Nauchno-tekhn. izd-vo avtotransp.  
lit-ry, 1957. 146 p. (MIRA 10:10)  
(Roads--Surveying)

BASARGIN, V.A., inzh.; GRINBERG, V.L., inzh.; TKHOR, A.P., inzh.;  
ZAZIMKO, V.N., inzh.

Mechanization of duck breeding farms. Mashinostroenie no.5:  
83-84 S-0 '64 (MIRA 18:2)

GIBINSKI, Kornel; WALENDOWSKA, Jadwiga; ZAZGORNIK, Jan

Adhesive properties of blood platelets in arteriosclerosis.  
Pol. arch. med. wewnet. 34 no.10:1305-1309 '64

Use of niamide in decreasing adhesive properties of blood  
platelets in arteriosclerosis. Ibid.:1311-1315

1. Z III Kliniki Chorob Wewnętrznych Śląskiej Akademii Med-  
ycznej w Katowicach (Kierownik: prof. dr. med. K. Gibinski).

LEBOVITZ, A.S.; ZACHAROV, V.N.; LISUNOV, V.N.

Electric drive of the automatic unloading system of dump cars.  
(MIRA 12:8)

MAVROVA, M.Ya.; ZAZHIGIN, V.S.

Systematics and biology of shrews in Krasnodar Territory and the  
evaluation of their role in the foci of leptospirosis. Zool. zhur.  
44 no.1:101-109 '65. (MIRA 18:4)

1. Leptospiroznaya laboratoriya Moskovskogo Instituta Imeni  
Mochnikova.

ZAZHIGIN, V.V.

We are erecting solid and attractive buildings along the tracks.  
Put' 1 put.khoz. 6 no.2:17 '62. (MIRA 15:2)

1. Nachal'nik Vologodskoy distantii puti, g. Vologda.  
(Railroads---Buildings and structures)